**Lab (7)**

**Determination of Calcium in Milk**

**Method**

* Combine 5mL of sample, 45mL distilled water, and 4mL of 8M **sodium hydroxide** solution into an Erlenmeyer flask and allow solution to stand for about 10 minutes with occasional swirling.
* A small of magnesium hydroxide may **precipitate** during this time. Do not add the indicator until you have given this precipitate a chance to form.
* Then add 7 drops of the **Solochrome dark blue** solution
* After that start to **titrate with EDTA** solution
* Repeat titration for three trials

**Results:**

|  |  |
| --- | --- |
|  | **EDTA volume (ml)** |
| 1 |  |
| 2 |  |
| Average |  |

**Calculations:**

1. **Calculate the moles of EDTA** required to complex the Ca2+ ions in the sample.

* Number of moles (for EDTA) = Molarity of EDTA (0.03408) x volume of EDTA (in L)

Ratio Ca2+ : EDTA = 1 : 1 (moles of EDTA = moles of Ca+)

2. **Calculate weight of Ca2+**:

**🡺** Weight of Ca2+ = Number of moles x molecular weight (40.78)

3. **% of Ca2+** = (weight of Ca2+ / weight of sample) x 100